

Date: Fri, 4 Nov 94 04:30:28 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: List
Subject: Ham-Ant Digest V94 #365
To: Ham-Ant

Ham-Ant Digest Fri, 4 Nov 94 Volume 94 : Issue 365

Today's Topics:

*** Q: WHAT KIND OF PEOPLE ON THE NET ?
2m bev.?
50 Ohms Why ? (2 msgs)
Advice on Windom and Center Fed Antenna
Best vertical - Butternut?
HARDLINE...which one!?
Hombrew Ceramic Insulators?
If a half wave is good, is 3/2 wave better?
PIN diodes for HF array

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 3 Nov 1994 17:05:06 GMT
From: cisitm@albert.cad.cea.fr (Pierre Didierjean)
Subject: *** Q: WHAT KIND OF PEOPLE ON THE NET ?

I'd like to know what kind of people i find on the net.

Students, Commercials, Adminitrations, Scientifics or what ??

Is anybody knows that or have statistical results ?

What are YOU doing in life ?

I am a system administrator.

Thanks for the answers and sorry for my english

Bye

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+-----+
|      Pierre DIDIERJEAN      |
|                               |
|      Administrateur Systeme UNIX      |
|      Cisi, Aix-en-Provence      |
|      France      |
+-----+
| email :  cisitm@albert.cad.cea.fr      |
+-----+
```

Date: 2 Nov 1994 21:13:36 -0500
From: c002@ns3.CC.Lehigh.EDU (David M. Roseman)
Subject: 2m bev.?

can i use a 3-5 wave bevriage antenna on the 2m band? or are they only for HF bands?

thanks....btw: can anyone send my a copy of bevriage antenna sections of the ARRL antenna hand book anyway?

DAvid

```
|-----|
|      David Roseman      |      c002@lehigh.edu      |
|      SysOp of NODE 3 BBS      |      The Flying HAM - BBS      |
|      Running OBV/2 Software      |      KBR-9318 - CB      |
|                               |      N3SQE/SVARC - Ham      |
|      HAMmy in IRC      |      N3SQE@N3IQD.FN20GO.PA.USA.NA - Packet      |
|-----|
```

Date: Wed, 2 Nov 1994 20:12:14
From: fireweed@alaska.net (Jeremy D. Lansman)
Subject: 50 Ohms Why ?

In article <3936kn\$qpr@crl.crl.com> rdcole@crl.com (Ron Cole) writes:

>From: rdcole@crl.com (Ron Cole)
>Subject: Re: 50 Ohms Why ?
>Date: 31 Oct 1994 08:39:51 -0800

>Alastair "J." Downs (ee17@csu.napier.ac.uk) wrote:
>: This has probably been asked before (but at least it may have been clarified)

>: Why choose 50 ohms as the stanard characteristic impedance for RF kit ?

>Here's how it was explained to me. Back many years ago standard sizes of
>copper water pipe were used to make coax. A combination of two sizes.
>Inner and outer conductors yeilded a 51 ohm impedance. That be default
>becam the impedance used. No how the 300 or 450 ohm open lines od even
>some of the comercial stuff like 270 ohm open line.

>I know their has to be a better explanation but thats what an Old Radio
>engineer told me. Hey we was building 50Kw AM's over 60 years ago so
>how am I to argue.

>-----
>Ron Cole Internet:rdcole@crl.com ICBM:29 31.03 N
>N5HYH CIS:70325,102 98 25.55 W
>CE KZEP/KHBL AX25:N5HYH @ K3WGF.STX.NA
>-----

As someone who is still assembling some higher power stuff out of water pipe,
and as someone who has spent most of his life in broadcasting, I can assure
you the water pipe answer is true. One particular combination of 1 1/2" pipe
and inner conductor results in 51.7 ohms, which when you put in some spacers,
cuts it to 51.5 ohms, which was the in and out impedance of older 50's
TV and FM stuff. 51.5 ohm co-ax can still be found in some TV trnasmitter
plants.

If any one wants to know what pipe gets what impedance, I could post the Lotus
chart I made up.

Jeremy Lansman
fireweed@alaska.net

Date: Wed, 2 Nov 1994 12:29:26 GMT
From: burke_br@adcae1.comm.mot.com (Bruce Burke)
Subject: 50 Ohms Why ?

In article 9410281220@csu.napier.ac.uk, ee17@csu.napier.ac.uk (Alastair "J."
Downs) writes:
{This has probably been asked before (but at least it may have been clarified)

}
}Why choose 50 ohms as the stanard characteristic impedance for RF kit ?
}
}regards,
}
}
}%% Alastair J. Downs _ _ _ _ Edinburgh, Festival City, %%

Because it is the geometric mean between a monopole (vertical) and a
1/2 wave dipole.

73,

Bruce, WB4YUC

Date: 3 Nov 1994 16:18:51 GMT
From: Cecil_A_Moore@ccm.ch.intel.com
Subject: Advice on Windom and Center Fed Antenna

In article <ryme.42.000BC150@husky.bloomu.edu>,
John M. Rymell <ryme@husky.bloomu.edu> wrote:
> Planning to install a new multiband antenna for HF (80-10m) work. I am
> interested in advice and comments concerning the Windom and center-fed
> antennas, type of lead-in wire, and theuse of antenna tuners.

Hi John, 100-105 ft dipoles fed with 450 ohm ladder-line are very popular
and work well with antenna tuners and husky baluns. Don't believe the
advertisments on the Windoms saying that there is a magic feed point that
makes the antenna flat on all bands, it ain't so. Windoms need an antenna
tuner or at least a tunable pi-network final and they have an asymetrical
radiation pattern which may be good or bad for you. I would suggest that
anyone serious about antennas use a program like ELNEC. Radiation patterns
are very important. How many people know that a dipole longer than 1.5
wavelengths has very little broadside radiation? I thought my 102 ft dipole
wasn't working on 20m and 17m but it was just not oriented properly.

--
73, Cecil, KG7BK, 00TC (All my own personal fuzzy logic, not Intel's)

Date: 1 Nov 1994 20:03:32 -0500
From: radkins@passport.ca (Rodney Adkins)
Subject: Best vertical - Butternut?

ignacy@misz.animal.uiuc.edu (Ignacy Misztal) wrote:

>
>I am in a process of selecting a vertical. My 2x40ft
>dipole at 25ft fed by a ladderline works all band with
>a tuner but performance isn't good except on 40m.
>
>I would prefer a vertical with a 10-40m coverage, 80m
>being a bonus. Since there is some room for radials, I
>don't consider expensive R7 particularly because of its
>narrow bandwidth on 20 and 40m.
>
>One of the choices is Butternut HF6V. It is light, its
>mass is concentrated in the lower section so as to
>present a low windload, and its coils are large. Did
>anybody compare HF6V to any other vertical (or anything
>else)? Can anyone recommend anything else
I have an HF6V that I mounted on a 20ft pole, tilt-over for
ease of adjustment...and it does need a *lot* of adjustment!!
Mine covers the full bandwidth of 10m-40m, but only 70kHz on
80m. I found that signal reports were about 10-15dB down on 40m
vs a dipole up abt 25ft.
I fitted the 30m & 17m kit...30m is fine, but 17m is way
off...& I don't understand the tuning method for these
bands...anybody help??
I find the HF6V survives the Canadian winters well...sways
alarmingly, but stays up (have not yet put on the recommended
guys above the coils, which would help)
Conclusion: once tuned, can switch from band to band without
using tuner, but horizontal antennas would definitely be
better. The radials do become a rats nest!
>
>One choice of a home made vertical could be a dipole
>with one part being a vertical pole and the other part
>horizontal (or sloping). It could be multiband too.
>Anybody tried to do it? perhaps one problem with it
>would be a lack of symmetry.
>
>Ignacy Misztal Ham radio: N09E, SP8FWB
>E-mail: ignacy@uiuc.edu
>University Of Illinois 1207 W. Gregory Dr.,
>Urbana, IL 61801, USA tel. (217) 244-3164 Fax:
>(217) 333-8286

Date: 2 Nov 1994 21:10:01 -0500
From: c002@ns3.CC.Lehigh.EDU (David M. Roseman)
Subject: HARDLINE...which one!?

>David,
> If you are discussing the commercial CATV cable types ie. the
>distribution cable that they hang on poles etc. which is generally 1/2 to
>3/4 inch diameter cable with a solid aluminum sheath and a center
>conductor surrounded by foam, then you have no problem. A couple of
>people make coupling transformers to use the 75 ohm CATV cable with 50
>ohm Radio systems. I don't have a name handy but check QST, CQ etc, or
>the local hamfest and you can probably find them. If you were discussing
>small indoor 75 ohm cable I don't think the cost of the couplers would be
>worth it, probably cheaper to buy RG58.. Hope this helps...
>
>73 De AD4HV Mike Fletcher
>fletcher@gate.net

ok, thanks for the info....the only name i have seen is Z.D. engineering ,
which has xformers....

DAvid

David Roseman	c002@lehigh.edu
SysOp of NODE 3 BBS	The Flying HAM - BBS
Running OBV/2 Software	KBR-9318 - CB
	N3SQE/SVARC - Ham
HAMmy in IRC	N3SQE@N3IQD.FN20GO.PA.USA.NA - Packet

Date: Wed, 2 Nov 1994 00:09:34 -0500
From: Tony Stalls <rstalls@access1.digex.net>
Subject: Hombrew Ceramic Insulators?

Big roller inductors are expensive! (Kilo-Tec lists their 3 KW, 24 uH, @
\$150... Wow!) They aren't complicated and I can't see why one couldn't be
made for very little IF I can come up with proper ceramic insulators.
However, meeting particular specs might be a little difficult from the
usual surplus sources and going elsewhere puts us right back in the price
range of buying a finished inductor.

Does anybody have any experience at making ceramic insulators or know of a
source that describes what the proper materials are and how it should be
fabricated?

Date: 1 Nov 1994 16:07:11 GMT
From: djenkins@jetson.uh.edu (David Jenkins)
Subject: If a half wave is good, is 3/2 wave better?

OK, I put up a half wave dipole cut for 80M, fed with tuned ladder line. It's configured as a half-a**ed inverted vee, I guess, but it's only up about 22'. Works great, though--I've talked regularly to NY and Pa from Tx on 40M. I would like to raise the antenna height, and so I am planning where end supports will be, and at what height. I have a lot of room in which I can put up a much longer dipole, if it would enhance performance.

Question 1: If I extend the length of each leg to 3/4 wave cut for 80M, could I expect to gain anything strictly as a result of the greater length? What will happen to 40? Any implications for 160?

Question 2: I really have no empirical method for checking this, but it's my impression that 40M performance is far better than 80M.

David F. Jenkins
Decision and Information Sciences
University of Houston
KC5JRR

Date: Wed, 2 Nov 1994 20:19:45 GMT
From: mallick@crd.ge.com (John Mallick)
Subject: PIN diodes for HF array

In article <3965dv\$5m7@hpscit.sc.hp.com>, rkarlqu@scd.hp.com (Richard Karlquist) writes:

|> In article <3923n6\$mdd@krel.iea.com>,
|> D.C. Henderson <n0dh@comtch.iea.com> wrote:
|> >Anyone out there have any experience with PIN diodes for switching
|> >matching networks in an steerable HF phased array?
|> >
|> >Specifically on 160 and 80 meters at full legal power limits? Diodes you
|> >used? etc. etc.
|> >
|> >Thanks
|> >Dave
|> >N0DH
|> >
|>
|> The best diodes are available from Microsemi in Watertown, Taxachussetts.

|> Used to be Unitrode. They have lifetimes up to 25 (yes, twenty-five!)
|> microseconds.
|>
|> Rick N6RK
|> rkarlqu@scd.hp.com

Those are the MicroSemi UM21xx series of diodes. I used them in an RF switch design here and they worked like a charm. They could be expensive in small quantities, though, and the lead times might be long. Give them a call and get some datasheets.

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.....  
John A. Mallick WA1HNL          E-mail: mallick@crd.ge.com  
GE Corporate Research and Development  Phone: (518)-387-7667 (W)  
Schenectady, NY 12301          FAX: (518)-387-6560 (W)  
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"Work like hell. Tell everyone everything you know. Close a deal with a handshake. And have fun." --- "Doc" Edgerton

End of Ham-Ant Digest V94 #365
